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| 10/731,022 | 12/10/2003 | Toshihiko Kaku | 4243-0107P | 5185 |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/731,022 | | KAKU, TOSHIHIKO | |
| | Examiner | | Art Unit | |
| | Jamares Washington | | 2625 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/10/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nobuyuki Nakajima et al (US 6025929 A) in view of Hiroyasu Yamamoto (US 6577751 B2).

Regarding claim 1, Nakajima discloses an image output apparatus ("The present invention relates to an image processing apparatus and method thereof, and more particularly, to an image processing apparatus and method thereof for controlling image processing performed on inputted image data" at column 1 line 9) comprising:

an image output section that outputs an image in accordance with received image data ("The present invention has been made in consideration of the above situation, and has as its

object to provide an image processing apparatus and method thereof for controlling image processing in accordance with a usage of an output image” at column 2 line 15), the image output section having a plurality of output modes mutually different from one another in output quality (“FIG. 21 is a table showing the combination of levels of an output mode and processing to be performed” at column 10 line 56); and

a correcting section that transfers image data to the image output section upon application of processing of detection and correction of a predetermined inconvenience (Fig. 25 numeral 51 “Image processing unit” transfers data to numeral 16 “Output unit” after numeral 11 “analyzing unit” analyzes the data), or transfers image data to the image output section without application of processing of detection and correction of the predetermined inconvenience to the image data (“As has been described above, according to the present invention, image processing is set in accordance with image process conditions that have been set depending on usage of an output image” at column 9 line 65), in accordance with a situation as to whether an associated output mode of the image output section is a predetermined output mode which is relatively high in the output quality among the plurality of output modes (Described in Fig. 21, less processing occurs as image quality for the output image is degraded).

Nakajima does not expressly disclose the predetermined condition being an inconvenience as to eyes in the image represented by the image data to the image data.

However, Yamamoto teaches, in the same field of endeavor of determining image processing conditions using image data obtained (“...the obtained image data is subjected to specified image processing schemes to produce image data for output...” at column 2 line 60, Yamamoto), a well-known condition in the art of image processing in need of correction to

obtain high quality output images being the red eye correction (“... which is capable of effective red eye correction during the making of simultaneous prints so that high-quality images without the red-eye problem can be output in a consistent manner” at column 2 line 62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Yamamoto in which the predetermined inconvenience or processing condition to image data is red eye detection and correction into the apparatus as disclosed by Nakajima because “...the most important factor to the image quality is how fine the human subject is finished. Therefore, the phenomenon of "red eye" in which the eyes (or pupils) of a human subject appears red due, for example, to the reflection of light from an electronic flash used in shooting is a serious problem indeed” which needs correction for high quality output images.

Regarding claim 2, the Nakajima-Yamamoto combination discloses an image output apparatus according to claim 1.

The Nakajima of the Nakajima-Yamamoto combination fails to teach the output quality is a number of pixels constituting an image.

However, Yamamoto in the same field of endeavor teaches image quality corresponding to a number of pixels (“The identification of the type of the cellular phone 1 specifies the resolution of the liquid crystal panel LCD” at column 10 line 9). The resolution of an image is cited as the total number of pixels in an image; typically given as number of megapixels.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teachings of Yamamoto in determining picture quality by the number of

pixels in the image to the apparatus as disclosed by Nakajima in which image correction and quality is controlled because the more pixels used to represent an image, the closer the result can resemble the original therefore producing a higher-quality image.

Regarding claim 4, the Nakajima-Yamamoto combination discloses an image output apparatus according to claim 1, wherein the correcting section (Fig. 25 numeral 51 "Image processing unit", Nakajima) applies, as the processing (Fig. 28 Image Processing condition setting module, Nakajima), a red eye correcting processing in which red eyes in the image are detected and corrected (Condition being red eye detection and correction as taught in claim 1 rejection above, Yamamoto).

Regarding claim 5, the Nakajima-Yamamoto discloses an image output program storage medium storing an image output program ("Further, the object of the present invention can be also achieved by providing a storage medium storing program codes for performing the aforesaid processes to a system or an apparatus, reading the program codes with a computer (e.g., CPU, MPU) of the system or apparatus from the storage medium, then executing the program" at column 12 line 45), the image output program comprising:

an image output section that outputs an image in accordance with received image data, the image output section having a plurality of output modes mutually different from one another in output quality as rejected in claim 1 above; and

a correcting section that transfers image data to the image output section upon application of processing of detection and correction of a predetermined inconvenience as to eyes in the

image represented by the image data to the image data, or transfers image data to the image output section without application of processing of detection and correction of the predetermined inconvenience to the image data, in accordance with a situation as to whether an associated output mode of the image output section is a predetermined output mode which is relatively high in the output quality among the plurality of output modes as rejected in claim 1 above.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Nakajima-Yamamoto combination as applied to claim 1 above, and further in view of well-known principles in the art of image processing.

Regarding claim 3, the Nakajima-Yamamoto combination discloses an image output apparatus according to claim 1.

Nakajima of the Nakajima-Yamamoto combination fails to expressly disclose the output quality is a display time for an image.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to use a display time for an image as its determination of output quality as it would determine the visual acuity of an image. Display time, pixel count, display size, etc. all affect the visual perception of an image and would equally work as an image quality measure according to the output device used. In other words, visual acuity of an image can be affected by a number of equally viable measures depending on the output device. Whichever measure needed, that would affect the visual quality of an image, could be used in this case realizing that visual quality is the key aspect to the invention. (Official Notice)

Therefore using the display time as the output quality measure for an image appears to merely be design choice by applicant to point out one particular effect on visual acuity given an output apparatus. It would have been obvious to one of ordinary skill in the art to modify the Nakajima-Yamamoto reference with using a display time as the quality measure to obtain the invention as specified in claim 3.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masanori Ishida et al (US 6714204 B2) in combination with Hiroyasu Yamamoto (US 6577751 B2).

Regarding claim 6, Ishida discloses a server apparatus (Fig. 1 numeral 100 “server”) that transmits received image data to a client apparatus (Fig. 1 numeral 1 “cellular phone” receiving image data) that outputs an image in accordance with the received image data (“The downloaded image data are processed by a control unit 10 incorporated in the cellular phone 1, and are displayed on a liquid crystal panel LCD” at column 8 line 5), the server apparatus comprising:

an image correcting section (“The image processing unit causes input master image data to be subjected to a specified series of image processing. The details of the image processing are set according to the type of the image receiver device” at column 2 line 43);

an output quality obtaining section that obtains output quality of an image of the client apparatus (Fig. 4 numeral S10 “The server 100 first collects device information regarding a terminal that communicates with the server 100 at step S10. Here the device information identifies the type of the terminal” at column 12 line 47); and

an image data transmission section (computer implemented apparatus transmitted through software applications) that transfers image data corrected in the inconvenience in the image correcting section to the client apparatus (Fig. 4 numeral S18 “Transmit result of processing”), or transfers image data not corrected in the inconvenience to the client apparatus (“The tag specifies the details of the processing, that is, execution of both the tone correction process and the halftoning process, execution of only the tone correction process, or no execution of either processes. The server 100 maps the tag generated at step S16 to the result of the image processing obtained at step S14 and transmits the mapping to the terminal at step S18” at column 13 line 9), in accordance with a situation as to whether the output quality obtained in the output quality obtaining section is higher than a predetermined quality (“The device information collector unit 108 collects device information regarding the cellular phone 1 via the communication. The device information identifies the type of the cellular phone 1 and includes diverse pieces of information relating to display characteristics, such as the adjustment value of the contrast on the liquid crystal panel LCD and the on-off state of a backlight of the liquid crystal panel LCD. Which pieces of information to be collected are adequately set on the system design by taking into account the effects on the picture quality” at column 9 line 63).

Ishida fails to teach an image-processing unit that detects and corrects a predetermined inconvenience as to eyes in the image represented by the image data.

However, Yamamoto teaches, in the same field of endeavor of determining image processing conditions using image data obtained (“...the obtained image data is subjected to specified image processing schemes to produce image data for output...” at column 2 line 60, Yamamoto), a well-known condition in the art of image processing in need of correction to

obtain high quality output images being the red eye correction (“... which is capable of effective red eye correction during the making of simultaneous prints so that high-quality images without the red-eye problem can be output in a consistent manner” at column 2 line 62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Yamamoto in which the predetermined inconvenience or processing condition to image data is red eye detection and correction into the image server as disclosed by Ishida because “...the most important factor to the image quality is how fine the human subject is finished. Therefore, the phenomenon of "red eye" in which the eyes (or pupils) of a human subject appears red due, for example, to the reflection of light from an electronic flash used in shooting is a serious problem indeed” which needs correction for high quality output images.

Regarding claim 7, the Ishida-Yamamoto combination discloses an image output system comprising a plurality of client apparatuses (“There is a possibility that the processing is concentrated on the server that communicates with a number of terminals” at column 12 line 4) each outputting an image in accordance with received image data (“...the terminal... displays a resulting processed image at step S26” at column 13 line 40), and a server apparatus that transmits image data to the client apparatuses (Fig. 1 numeral 100 “Server” transmitting image data), wherein the plurality of client apparatuses include a plurality of types of client apparatuses (“...the series of image processing executed by the server 100 is changed according to the type of the cellular phone 1” at column 17 line 57. “A diversity of other devices connectable with the network may be applied for the image output terminal. For example, the liquid crystal display,

Art Unit: 2625

the general purpose computer, or the printer may be the terminal” at column 18 line 31) that output images having output qualities mutually different from one another (“The series of image processing to be executed may adequately be selected according to the type of the terminal” at column 18 line 38. The server obtains the characteristics of the different terminals in order to process the image data according to the terminal requesting the image. If the terminals had mutual output qualities, there would be no need to obtain the terminal information.), and wherein the server apparatus comprises:

- an image correcting section that detects and corrects a predetermined inconvenience as to eyes in the image represented by the image data as rejected in claim 6 above;

- an output quality obtaining section that obtains output quality of an image of the client apparatus (Fig. 4 numeral S10 “The server 100 first collects device information regarding a terminal that communicates with the server 100 at step S10. Here the device information identifies the type of the terminal” at column 12 line 47); and

- an image data transmission section (computer implemented apparatus transmitted through software applications) that transfers image data corrected in the inconvenience in the image correcting section to the client apparatus (Fig. 4 numeral S18 “Transmit result of processing”), or transfers image data not corrected in the inconvenience to the client apparatus (“The tag specifies the details of the processing, that is, execution of both the tone correction process and the halftoning process, execution of only the tone correction process, or no execution of either processes. The server 100 maps the tag generated at step S16 to the result of the image processing obtained at step S14 and transmits the mapping to the terminal at step S18” at column 13 line 9), in accordance with a situation as to whether the output quality obtained in the output

Art Unit: 2625

quality obtaining section is higher than a predetermined quality ("The device information collector unit 108 collects device information regarding the cellular phone 1 via the communication. The device information identifies the type of the cellular phone 1 and includes diverse pieces of information relating to display characteristics, such as the adjustment value of the contrast on the liquid crystal panel LCD and the on-off state of a backlight of the liquid crystal panel LCD. Which pieces of information to be collected are adequately set on the system design by taking into account the effects on the picture quality" at column 9 line 63).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamares Washington whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jamare Washington
Junior Examiner
Art Unit 2625



July 5, 2007



KING Y. POON
~~PRIMARY EXAMINER~~
Supervising Patent